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10/529,002	12/15/2005	Joachim Haedicke	2002P00990WOUS	8810
46726 7590 01/22/2010 BSH HOME APPLIANCES CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 100 BOSCH BOULEVARD NEW BERN, NC 28562				
EXAMINER ROST, ANDREW J				
ART UNIT 3753		PAPER NUMBER		
NOTIFICATION DATE 01/22/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

### Office Action Summary

**Application No.**

10/529,002

**Applicant(s)**

HAEDICKE ET AL.

**Examiner**

Andrew J. Rost

**Art Unit**

3753

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-18, 20, 22, 23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-18, 20, 22, 23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendment filed after final dated 9/18/2009. Claims 14 and 26 are currently amended. Claims 1-13, 19, 21 and 24 have been canceled. No claims have been newly added. Presently, claims 14-18, 20, 22, 23 and 25-28 are pending.

### ***Response to Arguments***

2. Applicants' arguments filed 9/18/2009 have been fully considered but they are not persuasive.

3. Applicants argue the rejection of claims 14, 15, 17, 18, 20, 23, 24 and 26 under 35 U.S.C. 102(b) as being anticipated by Laurent (5,145,148) on page 7, last paragraph to page 8, second paragraph. Applicants argue that the sleeve 56 does not serve any guiding function for the armature 20. The mobile magnetic anchor is taken to be a combination of elements 20, 26, 54 and 56 (elements 54 and 56 are both part of a pin 38). Sleeve 56 provides a close fit with the circular outer diameter of the wall of the through-bore 27 for allowing the wall to guide the axial reciprocation of the pin as the solenoid is energized and de-energized (col. 3, lines 38-42). Therefore, the sleeve 56 does serve as a guide member for the mobile magnetic anchor as the solenoid is energized and de-energized. Applicants argue that the coil 18 is not arranged as a separate component outside of the armature housing on a magnetic insert. However, it is considered that the coil 18 is contained within a separate housing including element

16 which is located outside of the armature housing (combination of element 12 and the element that supports spring 36 and defines the gap 46).

4. Applicants argue the rejection of claims 14-18, 20, 23, 24 and 26 under 35 U.S.C. 103(a) as being unpatentable over Kolze et al. (4,697,608) in view of Brehm et al. (5,636,828) on page 9, second full paragraph. Applicants argue that the Kolze et al. reference and the Brehm et al. reference fail to teach the use of a second anchor guide section individually. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). However, the Kolze et al. reference disclose the use of an anchor guide section (inner wall of housing 58) to be made of a plastic material (figure 4) while the Brehm et al. reference teach the use of a bearing (38) along which a mobile magnetic armature is guided (the armature includes element 17 and the tappet 35 which is press-fit to the element) with the bearing (38) to be made of a metal. Therefore, the combination of the first magnetic anchor guide section of the Kolze et al. reference with the second magnetic anchor guide section (bearing 38) as taught by the Brehm et al. reference addresses the applicant's concerns wherein Brehm et al. teach the use of the second magnetic guide section in order to ensure that the magnetic anchor is guided properly within the lower region of the valve assembly (col. 2, lines 43-46).
5. Applicants argue the rejection of claims 14, 15, 17, 18, 20, 23, 24 and 26-28 under 35 U.S.C. 103(a) as being unpatentable over Kaselow (4,830,602) in view of

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Laurent (5,145,148) on page 9, last paragraph. Applicants argue that the solenoid of the Kaselow reference does not have a coil that is arranged as a separate component outside the armature housing. However, the Laurent reference was used to teach the details of the solenoid valve since the details of the solenoid valve of the Kaselow reference were not specified. Additionally, with respect to the Laurent reference, it is considered that the coil 18 is contained within a separate housing including element 16 which is located outside of the armature housing (combination of element 12 and the element that supports spring 36 and defines the gap 46).

6. Since the grounds of rejection were presented in the previous office action, the instant office action has been made final.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 14, 15, 17, 18, 20, 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Laurent (5,145,148).

Regarding claims 14 and 26, Laurent discloses a valve assembly for closing a fluid path (path defined between inlet port 22 and outlet port 24) of a body (12) wherein

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the valve assembly has an armature housing (12 and element that supports spring 36 and defines a gap 46) that houses a mobile magnetic anchor (20, 26, 54 and 56), a valve seat (28) in which the mobile magnetic anchor includes a valve closing element (26) that presses on the valve seat to close the fluid path and at least two magnetic anchor guide sections (56 and the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 that are guided along the inner surface of the armature housing that defines a gap 46 wherein the guide sections are guide sections in as much as disclosed by applicant) that are spaced axially apart with the at least two magnetic anchor guides being made from different materials including one being made of a plastic (element 56 which guides the mobile magnetic anchor along a passage in element 12 is constructed of plastic as shown in figure 1) and with the other magnetic anchor guide being made of a metal (the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 is constructed of a metal as shown in figure 1) wherein the valve assembly further includes an electromagnetic coil (18) for operating the valve assembly with the electromagnetic coil being arranged as a separate component outside of the armature housing (coil 18 is contained within a separate housing including element 16).

Note: the material flowing through the device is not given patentable weight unless the device is not capable of functioning with the intended fluid(s). See MPEP 2115.

In regards to claim 15, Laurent discloses the electromagnetic coil (18) is arranged gastight separately from the flow path (the coil 18 is encased within a separate

housing including element 16 and a fluid that is able to enter gap 46 is contained by the use of seals 50 and 52).

In regards to claim 17, Laurent discloses the electromagnetic coil (18) to be arranged on the outside of the body (12).

In regards to claim 18, Laurent discloses a portion of the magnetic anchor protrudes outside of the body (portion 20 of the magnetic anchor is located outside of the body 12).

In regards to claim 20, Laurent discloses one of the at least two magnetic anchor guide sections is positioned within the body (guide 56 is located within the body 12) and the other of the at least two magnetic anchor guide sections is positioned outside the body (the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 that is guided along the inner surface of the armature housing that defines the gap 46 is located outside the body 12).

In regards to claim 23, Laurent discloses the armature housing to be formed in two separate parts including a section that is received within the body (12) and a section that is projecting from the body (element that supports spring 36 and defines a gap 46).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 14-18, 20, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolze et al. (4,697,608) in view of Brehm et al. (5,636,828).

Regarding claims 14 and 26, Kolze et al. discloses a valve assembly with a housing (12) having a passageway (as seen in Figs 4 & 6), comprising a valve for closing the gas path, wherein the valve includes an armature housing (58, 70) and having a mobile magnetic anchor (72) in said armature housing, a valve seat (portion of 70 on which the tip 80 seats in the closed position), said mobile magnetic anchor including a valve closing element which presses on said valve seat to close said passageway (tip 80 closes the flow path with contact to the valve seat), an electromagnetic coil (18) for activating said mobile magnetic anchor and valve closing element to close the passageway and said electromagnetic coil is arranged as a separate component outside of said armature housing on a magnetic insert (fig. 4 and 6) and a magnetic anchor guide (inner sidewall of housing 58 wherein the guide section



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is a guide section in as much as disclosed by applicant) made of a plastic material (figure 4). Kolze et al. does not disclose the use of a second magnetic anchor guide to be made of a metal. However, Brehm et al. teach the use of a bearing (38) along which a mobile magnetic armature (17, 35) is guided (shaft portion 35 slides along the bearing 38, col. 2, lines 36-40) in order to ensure that the guidance of the lower region of the mobile magnetic anchor (35) is ensured within the electromagnetic valve assembly (col. 2, lines 43-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve assembly of Kolze et al. with a sliding bearing as taught by Brehm et al. in order to ensure that the lower region of the mobile magnetic anchor is guided properly.

Note: the material flowing through the device is not given patentable weight unless the device is not capable of functioning with the intended fluid(s). See MPEP 2115.

In regards to claim 15, Kolze et al. disclose the electromagnetic coil arranged separate from the passageway (figure 4).

In regards to claim 16, Kolze et al. disclose the electromagnetic coil outside of the armature housing and is able to be detached.

In regards to claim 17, Kolze et al. disclose the electromagnetic coil outside of the housing (12).

In regards to claim 18, Kolze et al. disclose the magnetic anchor to partially protrude outside of the housing (12).

In regards to claim 20, the modified Kolze et al. reference disclose one of the at least two magnetic anchor guide sections is positioned within the body (guide portion defined sliding bearing as taught by Brehm et al.) and the other of the at least two magnetic anchor guide sections is positioned outside the body (guide portion defined by the inner sidewall of the armature housing 58).

In regards to claim 23, Kolze et al. disclose that the armature housing has one section set inside the housing (70) and another section projecting from the housing (58).

12. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laurent (5,145,148) in view of Grant et al. (5,188,017).

Laurent discloses a valve assembly for closing a fluid path (path defined between inlet port 22 and outlet port 24) of a body (12) wherein the valve assembly has a multi-piece armature housing (12 and element that supports spring 36 and defines a gap 46) that houses a mobile magnetic anchor (20, 26, 54 and 56), a valve seat (28) in which the mobile magnetic anchor includes a valve closing element (26) that presses on the valve seat to close the fluid path and at least two magnetic anchor guide sections (56 and the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 that are guided along the inner surface of the armature housing that defines a gap 46 wherein the guide sections are guide sections in as much as disclosed by applicant) that are spaced axially apart with the at least two magnetic anchor guides being made from different materials including one being made of a plastic (element 56 which guides the mobile magnetic anchor along a passage in element 12 is constructed

of plastic as shown in figure 1) and with the other magnetic anchor guide being made of a metal (the element that supports spring 36 and that guides 48 of the mobile magnetic anchor contact is constructed of a metal as shown in figure 1) wherein the valve assembly further includes an electromagnetic coil (18) for operating the valve assembly with the electromagnetic coil being arranged as a separate component outside of the armature housing (coil 18 is contained within a separate housing including element 16). Laurent does not disclose the use of a counter-anchor. However, Grant et al. teach the use of a counter-anchor (78) placed on the side of a mobile magnetic anchor opposite a valve seat in order to limit the stroke length of the mobile magnetic anchor in order to ensure a proper sealing of the valve (col. 5, lines 12-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve assembly of Laurent with a counter anchor as taught by Grant et al. in order to adjust the stroke path of the mobile magnetic armature.

13. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolze et al. (4,697,608) in view of Brehm et al. (5,636,828) and further in view of Grant et al. (5,188,017).

Kolze et al. in view of Brehm et al. disclose a valve assembly having a housing defining a flow path with an electromagnetic valve for closing the flow path wherein the electromagnetic valve has a multi-piece armature housing and having a mobile magnetic anchor, a valve seat, the mobile magnetic anchor having a valve closing end which presses on the valve seat to close the flow path, at least two magnetic anchor

guide sections with one being constructed of a plastic and a second being constructed of a metal (as taught by Brehm et al.) and an electromagnetic coil for activating the mobile magnetic anchor and valve closing element so that activation of the electromagnetic coil opens the flow path with the electromagnetic coil being arranged as a separate component outside the armature housing. The modified Kolze et al. reference does not disclose the use of a counter-anchor. However, Grant et al. teach the use of a counter-anchor (78) placed on the side of a mobile magnetic anchor opposite a valve seat in order to limit the stroke length of the mobile magnetic anchor in order to ensure a proper sealing of the valve (col. 5, lines 12-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve assembly of the modified Kolze et al. reference with a counter anchor as taught by Grant et al. in order to adjust the stroke path of the mobile magnetic armature.

14. Claims 14, 15, 17, 18, 20, 23 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaselow (4,830,602) in view of Laurent (5,145,148)

Regarding claims 14, 27 and 28, Kaselow discloses a valve assembly having an electromagnetic valve (15), a tap axle (9) being located within a flow path of a fluid through a valve body (13) wherein the tap axle is pivoted (rotated about an axis) to permit or prevent a flow of fluid through the valve body. Kaselow does not expressly disclose the structure of the electromagnetic valve. However, Laurent discloses a valve assembly for closing a fluid path (path defined between inlet port 22 and outlet port 24)

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of a body (12) wherein the valve assembly has an armature housing (12 and element that supports spring 36 and defines a gap 46) that houses a mobile magnetic anchor (20, 26, 54 and 56), a valve seat (28) in which the mobile magnetic anchor includes a valve closing element (26) that presses on the valve seat to close the fluid path and at least two magnetic anchor guide sections (56 and the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 that are guided along the inner surface of the armature housing that defines a gap 46 wherein the guide sections are guide sections in as much as disclosed by applicant) that are spaced axially apart with the at least two magnetic anchor guides being made from different materials including one being made of a plastic (element 56 which guides the mobile magnetic anchor along a passage in element 12 is constructed of plastic as shown in figure 1) and with the other magnetic anchor guide being made of a metal (the element that supports spring 36 and that guides 48 of the mobile magnetic anchor contact is constructed of a metal as shown in figure 1) wherein the valve assembly further includes an electromagnetic coil (18) for operating the valve assembly with the electromagnetic coil being arranged as a separate component outside of the armature housing (coil 18 is contained within a separate housing including element 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the electromagnetic valve of Kaselow as the electromagnetic valve in assembly as taught by Laurent in order to provide an electromagnetic valve that can be assembled in pieces for ease of manufacturing the electromagnetic valve.

Note: the material flowing through the device is not given patentable weight unless the device is not capable of functioning with the intended fluid(s). See MPEP 2115.

In regards to claim 15, Laurent discloses the electromagnetic coil (18) is arranged gastight separately from the flow path (the coil 18 is encased within a separate housing including element 16 and a fluid that is able to enter gap 46 is contained by the use of seals 50 and 52).

In regards to claim 17, Laurent discloses the electromagnetic coil (18) to be arranged on the outside of the body (12).

In regards to claim 18, Laurent discloses a portion of the magnetic anchor protrudes outside of the body (portion 20 of the magnetic anchor is located outside of the body 12).

In regards to claim 20, Laurent discloses one of the at least two magnetic anchor guide sections is positioned within the body (guide 56 is located within the body 12) and the other of the at least two magnetic anchor guide sections is positioned outside the body (the element being defined as the outer portion of the anchor 20 that contains axially extending slots 48 is located outside the body 12).

In regards to claim 23, Laurent discloses the armature housing to be formed in two separate parts including a section that is received within the body (12) and a section that is projecting from the body (element that supports spring 36 and defines a gap 46).

15. Claims 14-18, 20, 23 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaselow (4,830,602) in view of Kolze et al. (4,697,608) and further in view of Brehm et al. (5,636,828)

Kaselow discloses a valve assembly having an electromagnetic valve (15), a tap axle (9) being located within a flow path of a fluid through a valve body (13) wherein the tap axle is pivoted (rotated about an axis) to permit or prevent a flow of fluid through the valve body. Kaselow does not expressly disclose the structure of the electromagnetic valve. However, Kolze et al. discloses a valve assembly with a housing (12) having a passageway (as seen in Figs 4 & 6), comprising a valve for closing the gas path, wherein the valve includes an armature housing (58, 70) and having a mobile magnetic anchor (72) in said armature housing, a valve seat (portion of 70 on which the tip 80 seats in the closed position), said mobile magnetic anchor including a valve closing element which presses on said valve seat to close said passageway (tip 80 closes the flow path with contact to the valve seat), an electromagnetic coil (18) for activating said mobile magnetic anchor and valve closing element to close the passageway and said electromagnetic coil is arranged as a separate component outside of said armature housing on a magnetic insert (fig. 4 and 6) and a magnetic anchor guide (inner sidewall of housing 58) made of a plastic material (figure 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the electromagnetic valve of Kaselow as the electromagnetic valve in assembly as taught by Kolze et al. in order to provide an electromagnetic valve that can be assembled in pieces for ease of manufacturing the electromagnetic valve. The modified

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Kaselow reference does not disclose the use of a second magnetic anchor guide to be made of a metal. However, Brehm et al. teach the use of a bearing (38) along which a mobile magnetic armature (17, 35) is guided (shaft portion 35 slides along the bearing 38, col. 2, lines 36-40) in order to ensure that the guidance of the lower region of the mobile magnetic anchor (35) is ensured within the electromagnetic valve assembly (col. 2, lines 43-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve assembly of the modified Kaselow reference with a sliding bearing as taught by Brehm et al. in order to ensure that the lower region of the mobile magnetic anchor is guided properly.

Note: the material flowing through the device is not given patentable weight unless the device is not capable of functioning with the intended fluid(s). See MPEP 2115.

In regards to claim 15, Kolze et al. disclose the electromagnetic coil arranged separate from the passageway (figure 4).

In regards to claim 16, Kolze et al. disclose the electromagnetic coil outside of the armature housing and is able to be detached.

In regards to claim 17, Kolze et al. disclose the electromagnetic coil outside of the housing (12).

In regards to claim 18, Kolze et al. disclose the magnetic anchor to partially protrude outside of the housing (12).

In regards to claim 20, the modified Kaselow reference disclose one of the at least two magnetic anchor guide sections is positioned within the body (guide portion



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defined sliding bearing as taught by Brehm et al.) and the other of the at least two magnetic anchor guide sections is positioned outside the body (guide portion defined by the inner sidewall of the armature housing 58 as taught by Kolze et al.).

In regards to claim 23, Kolze et al. disclose that the armature housing has one section set inside the housing (70) and another section projecting from the housing (58).

### ***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:00 - 4:30 M-Th and 7:00 - 12:00 Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. J. R./  
Examiner, Art Unit 3753

/John K. Fristoe Jr./  
Primary Examiner, Art Unit 3753